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BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268–0001

Public Inquiry on the Methodology to Estimate the Value of the Postal Service Letter and Mailbox Monopolies	Docket No. PI2020-1

RESPONSES OF THE UNITED STATES POSTAL SERVICE
TO QUESTIONS 1-5 OF CHAIRMAN'S INFORMATION REQUEST NO. 1
(October 17, 2019)

The United States Postal Service hereby provides its responses to the above-listed questions of Chairman's Information Request No. 1, issued October10, 2019. The questions are stated verbatim and followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorney:

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1. The following questions relate to the differences between the Carrier Cost System (CCCS) manual sample and the CCCS Digital Delivery Point Sequence (DPS) sample.

a. Please refer to the CCCS manual sample route-day SAS data documentation (City Z File) in the FY 2018 Annual Compliance Report.[1] The SAS variable "TESTID" is described as the "Identification number for [the] test" and the SAS variable "STRATUM" is described as the "Stratum in which the route (testid) exists."[2]

i. Please confirm that the "TESTID" identifies a specific route and day in the specified sample stratum.[3]

ii. If not confirmed, please provide the descriptions in terms related to the sample design of what the "TESTID" variable represents in the CCCS manual sample route-day SAS data file.

b. Please refer to the CCCS ZIP Code-day digital DPS SAS data documentation (City Digital DPS Z File) in the FY 2018 Annual Compliance Report. *Id.* at 41. The SAS variable "TESTID" is described as the "Identification number for [the] test" and the SAS variable "STRATUM" is described as the "Stratum in which the route (testid) exists." *Id.*

i. Please confirm that the descriptions for the City Digital DPS Z file, "TESTID" and "STRATUM" SAS variables are correct.

ii. If the answer to question 6.i. is no, please provide revised definition(s). Please explain how the same named SAS variables in the City Z File differ from the identically-named SAS variables in the City Digital DPS Z File.

iii. Please explain the relationship (if any) between the SAS variable "TESTID" values that are the identical in both the City Z File and the City Digital DPS Z File.

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[1] *See* Docket No. ACR2018, Library Reference USPS-FY18-34, December 28, 2018, PDF file "USPS-FY18-34_CCCS_Preface.pdf" (Docket No. ACR2018, Library Reference USPS-FY18-34, Preface).

[2] *See* Docket No. ACR2018, Library Reference USPS-FY18-34, Preface at 35.

[3] There are three CCCS strata in the CCCS route-day estimation methodology. Specifically, the "TESTID" represents a sampled route and day that is either from "zones with 5 or fewer routes…," a route and day sampled from "zones with 6 or more routes and business routes," or a route and day sampled from "zones with 6 or more routes and residential routes." *See id.* at 4.

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iv. Please specify whether the "TESTID" values that are identical in both the City Z File and the City Digital DPS Z File were sampled on the same route-day. If not, please explain why not.

v. Please discuss whether the CCCS digital ZIP Code-day DPS volumes could be linked to the manually sampled CCCS route-day delivered volumes to estimate total volume delivered for the sampled route-day. If applicable, please explain how this linkage could be accomplished including any weighting necessary to estimate all city carrier routes total delivered volume.

vi. Please discuss whether the manually sampled route-day delivered volumes could be linked to the digital ZIP Code-Day DPS delivered volumes to estimate total volume delivered for the ZIP Code-day. If applicable, please explain how this linkage could be accomplished including any weighting necessary to estimate total city carrier routes delivered volume.

vii. Please explain whether the CCCS manual and digital sample SAS datasets contain the 5-Digit ZIP Code identifier for each sample record. If not, please explain whether the Postal Service could add 5-Digit ZIP Code identifiers to the manual and digital CCCS SAS datasets.

RESPONSE:

a. i. Confirmed.

ii. N/A

b. i-ii. While the definition of TESTID is confirmed, the definition of STRATUM should be revised to:

STRATUM: Stratum in which the zone (TESTID) exists.

iii. There is no relationship between the SAS variable "TESTID" values in both the City Z file and the City Digital DPS Z file. TESTID in the City Z file are

arbitrary values generated during the sample selection of route-days, while TESTID values in the City Digital DPS Z File are arbitrary values generated during the completely independent selection of zone-days.

iv. The identical "TESTID" values were not sampled on the same route-day. The identical values are coincidental. The "TESTID" values are generated independently from each other and have no relationship.

v. No, the sets cannot be linked to accurately estimate the total volume delivered for the sampled route-day. The volumes in the City Digital DPS file are the total volumes for all routes in the tested zone on the test day, not the separate volumes for individual routes. Even when the zone of a route tested in the manual CCCS test matches the zone of a digital CCCS test, it is very unlikely that these would both be tested on the same day since the samples are generated independently.

vi. No, the sets cannot be linked to accurately estimate the total volume delivered for the sampled zone-day. As discussed in part v. above, this can only be done in very rare instances where the same day and zone are sampled in both sets. This is rare, since the samples are generated independently.

vii. There is a 5-Digit ZIP Code identifier for each sample record within both files. These can be added to the Z files.

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2. The CCCS manual sample is a stratified random sample of letter route-days. *Id.* at 4. The CCCS manual sample has three letter route strata: (1) zones with 5 or fewer routes…, (2) zones with 6 or more routes and business routes, and (3) zones with 6 or more routes and residential routes. *Id.* Within each stratum, routes are geographically ordered, and a systematic sample of route-days is selected. *Id*.

a. Please confirm that the term "zones" is the same as ZIP Codes.

i. If the response to question 2.a. is not confirmed, please explain the difference(s) between zones and ZIP Codes.

ii. If the response to question 2.a. is confirmed, please explain whether the ZIP Codes in the quarterly CCCS manual sample are the same ZIP Codes as those in the quarterly CCCS DPS digital sample.

b. Please explain whether DPS volume mail products and characteristics differ on routes in: "zones with 5 or fewer routes," "zones with 6 or more routes and business routes," and "zones with 6 or more routes and residential routes."

c. Please clarify the meaning of "…and business routes" in the sample stratum description. *Id.* Please include in your response a description of how "business routes" are determined.

d. Please clarify the meaning of "…and residential routes" in the sample stratum description. *Id.* Please include in your response a description of how "residential routes" are determined.

e. For routes in "zones with 5 or fewer routes…," please discuss whether the terms "residential routes" and "business routes" apply.

f. Please provide the total number of routes per CCCS manual sample stratum in each FY 2017 and FY 2018 quarter. Please discuss the reason(s) for any increases or decreases in the stratum total number between these fiscal year quarters.

g. Please provide the number of routes sampled per CCCS manual sample stratum in each FY 2017 and FY 2018 quarter. Please discuss the reason(s) for any increases or decreases in the number of routes sampled in each stratum between these fiscal year quarters.

h. Please provide the number of days sampled for the CCCS manual sample in each FY 2017 and FY 2018 quarter. Please discuss the reason(s) for any increases or decreases in the number of days sampled in each stratum between these fiscal years.

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RESPONSE:

a. Confirmed.

i. N/A

ii. While the sets of ZIP Codes from which samples are drawn by both systems are the same, it will only be by chance that the same ZIP Code will be sampled by both the manual and digital systems. Even when the same ZIP is sampled, it is unlikely the tests would be conducted on the same day. This is because each system draws its samples independently.

b. They do differ. For example, routes in zones with a high proportion of business routes tend to have a higher proportion of First-Class Single Piece letters and a correspondingly lower percentage of Marketing Mail letters. Routes in zones with few routes (UIOCS) are more similar to the residential strata (URES). Please see attached workbook PI.ChIR1.Q.2.3.Attach.xlsx, sheet 2b.

c. A business route is a foot or motorized route on which 70 percent or more of the possible deliveries are business establishments. The types of deliveries and total possible deliveries are sourced from the Address Management System (AMS).

d. A residential route is a foot or motorized route on which 70 percent or more of the possible deliveries are residential. The residential stratum includes both residential and mixed (does not meet the residential route or business route criteria) routes. The types of deliveries and total possible deliveries are sourced from AMS.

e. These terms are applicable, but are not used within this stratum.

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f-h. Please see attached workbook PI.ChIR1.Q.2.3.Attach.xlsx, sheet 2f-g-h. The number of routes has been decreasing as Delivery Operations consolidates routes. The number of routes sampled and the number of days sampled have been stable.

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3. The CCCS DPS digital sample is a stratified random sample of ZIP Code-days. *Id.* at 28-29. The CCCS DPS digital sample has six ZIP Code strata. ZIP Codes with: (1)More than 20 city routes with business deliveries >=0.15 [percent], (2)More than 20 city routes with business deliveries < 0.15 [percent], (3)11-20 city routes with business deliveries >=0.15 [percent], (4)11-20 city routes with business deliveries < 0.15 [percent], (5)"10 or less city routes with business deliveries >=0.15 [percent], and (6)10 or less city routes with business deliveries < 0.15 [percent]. *Id.* at 29-30. Within each stratum, a systematic random sample of ZIP Code-days is selected. *Id.*

a. Please describe the DPS mail types and characteristics for ZIP Codes in the "More than 20 city routes with business deliveries >= 0.15 [percent]" stratum. *Id.*

b. Please describe the DPS mail types and characteristics for ZIP Codes in the "More than 20 city routes with business deliveries < 0.15 [percent]" stratum. *Id.*

c. Please describe the DPS mail types and characteristics for ZIP Codes in the "11-20 city routes with business deliveries >= 0.15 [percent]" stratum. *Id.*

d. Please describe the DPS mail types and characteristics for ZIP Codes in the "11-20 city routes with business deliveries < 0.15 [percent]" stratum. *Id.*

e. Please describe the DPS mail types and characteristics for ZIP Codes in the "10 or less city routes with business deliveries >= 0.15 [percent]" stratum. *Id.*

f. Please describe the DPS mail types and characteristics for ZIP Codes in the "10 or less city routes with business deliveries < 0.15 [percent]" stratum. *Id.*

g. Please provide the total number of ZIP Codes per stratum in each FY 2018 quarter.

h. Please provide the number of ZIP Codes sampled per stratum in each FY 2018 quarter.

i. Please provide the number of days sampled per stratum in each FY 2018 quarter.

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RESPONSE:

a-f. Please see attached workbook PI.ChIR1.Q.2.3.Attach.xlsx, sheet 3a-b-c-d-e-f.

g. Please see attached workbook PI.ChIR1.Q.2.3.Attach.xlsx, sheet 3g.

h. Please see attached workbook PI.ChIR1.Q.2.3.Attach.xlsx, sheet 3h.

i. Please see attached workbook PI.ChIR1.Q.2.3.Attach.xlsx, sheet 3i.

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4. The Postal Service states that in the CCCS DPS digital methodology, it uses "actual End-of-Run data from [Delivery Operations Information System] DOIS"[4] and "End-of-Run totals for each ZIP CODE are included for use in expansion." *Id.* at 29. To distribute DPS volume to products, "mail characteristics [based on] digitally captured images of letter- and card- shaped mail from Delivery Barcode Sequence (DBCS) second pass operations" are used as a distribution key for the DOIS obtained DPS volume. *Id*. at 28.

a. Please describe how DOIS collects and can tabulate DPS volume.

b. Please describe the tabulation difference(s) between the DPS "actual End-of-Run data from DOIS" and "End-of-Run totals for each ZIP CODE."

c. Please specify whether the DOIS DPS volume at the sampled route-day tabulation level was used in the CCCS estimation process prior to FY 2018. If so, please discuss how the route-day DOIS DPS volume was distributed to mail products.

RESPONSE:

a. End-of Run (EOR) counts from the DBCS sorters are compiled and transmitted to DOIS. The same data are also transmitted to the EDW partition for Network Operations Data Mart (NODM). Note that CCCS-Digital now obtains EOR data from EDW/NODM, rather than from DOIS. This was done in conjunction with the introduction of RCCS-Digital, which had to obtain EOR data from EDW/NODM, not from DOIS.

b. EOR counts are available for each ZIP code and route (as well as by other attributes such as operation number and sort plan). End of run total for each ZIP Code are aggregated from the end-of-run counts for each city carrier route within the ZIP.

[4] *Id.* at 29-30.

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c. The DOIS DPS data were not used in the CCCS estimation process prior to FY 2018.

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5. Please specify whether the DOIS DPS volume is available for the same route-days currently sampled in the manual CCCS.

a. If the answer to question 5. is no, please explain why.

b. If the answer to question 5. is yes, please discuss any available tabulations from the digital images that could potentially be used as a distribution key to distribute DPS volume to mail products for the route-day. In the response, please take into consideration any differences by stratum in the types of DPS mail products delivered for those types of routes and ZIP Codes.

c. If the answer to question 5. is yes, please discuss potential schedule(s) as to when the Postal Service could provide FY 2018 DPS volume distributed to mail products at the CCCS route-day level data using a revised distribution key.

RESPONSE:

5. Yes, the DPS volume is available from EDW/NODM.

a. N/A

b. It is unlikely that there would be sufficient digital samples for an individual route-day. Even when hundreds of images for a CCCS-Digital test are analyzed, the number analyzed from an individual route is relatively small, usually less than ten. Although this might be adequate if the objective were a sample sufficient to obtain a distribution by class groups (e.g. First-Class, Market Mail, Other), it would not be adequate if data at finer price categories were required.

Also, as discussed in the response to question 1, it would be rare for the zone of a route sampled in CCCS manual tests to also be sampled by CCCS-

Digital on the same day. A simple linkage of the two sampling systems is not possible.

The distribution factors for each CCCS-Digital stratum using the mail types and characteristics in DPS digital data (mailcode) are available, and provided in the response to question 3. As an approximation of the actual product volumes on a route day, these distribution factors could be applied to each total route-day DPS volume from EDW/NODM in the corresponding digital stratum. However, for business zones, these factors reflect an average of all routes in the entire strata that includes a mix of both business and residential routes. These distribution factors, based on zones that have more than 15 percent business stops, may not be a good proxy for a business route that has over 70 percent business stops.

In addition, an attempt to merge data from the CCCS-Digital with data from the CCCS-manual systems would require a reconciliation of the differences between the digital and manual strata, and would require substantial analysis that could not begin until after the FY 2019 Annual Compliance Report is completed.

While it is likely to prove difficult to obtain distribution factors from DPS digital images for individual routes, it appears to be feasible to obtain these for individual zones.

c. The tabulation of the distribution keys from CCCS-Digital data for existing strata can be obtained by the end of October. However, further analysis of the

relationship between CCCS-Digital and manual strata would have to wait until after completion of the Annual Compliance Report for FY2019 because of resource conflicts.